1957-11

The Nucleus

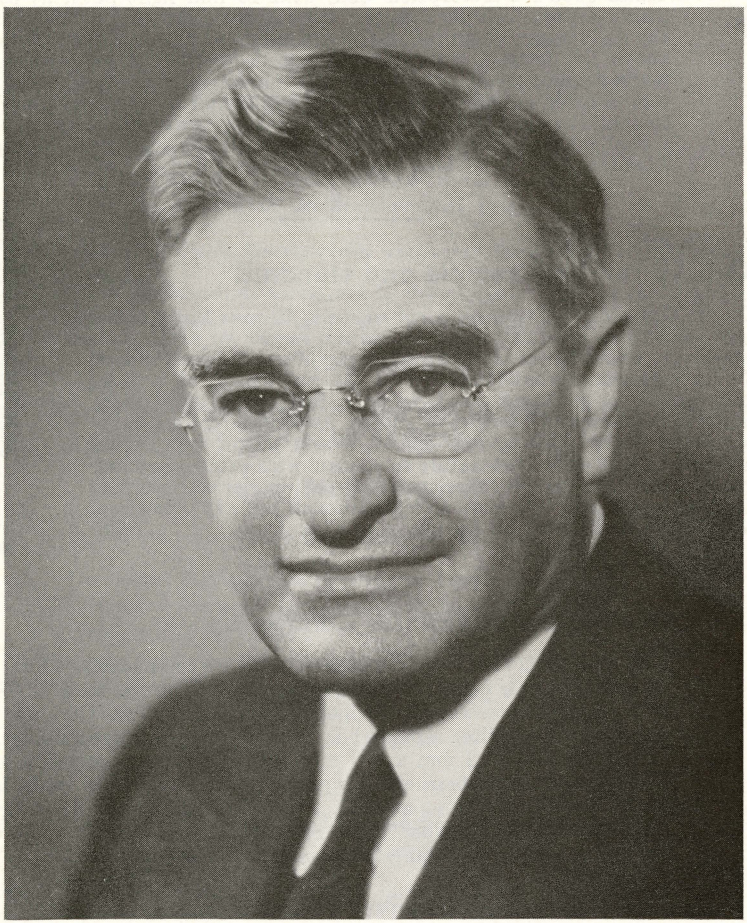
Northeastern Section of the American Chemical Society

VOL. XXXV, No. 2 NOVEMBER, 1957

The NUCLEUS

OF THE NORTHEASTERN SECTION OF THE AMERICAN CHEMICAL SOCIETY

Please reserve Friday, November 15, 1957 for A.C.S. Meeting



Farrington Daniels, Norris Award Recipient

Friday, November 15, 1957, at 8:00 p.m. at M.I.T.

Published by the NORTHEASTERN SECTION of the AMERICAN CHEMICAL SOCIETY, INC.

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CELL CARRIER for 0.4 ml sample

9085-D1. CELL CARRIER, Thomas, 0.4 ml, 10 mm light path. Permits use of sample as small as 0.4 ml in 9085-E Sample Holder (with spring on same side as cover hinge), which is regularly furnished with B. & L. "Spectronic 20" Spectrophotometer-Colorimeters 9084-A to 9084-K, inclusive. Takes 9085-N2 Absorption Cell, with 10 mm light path, as used in the Thomas Roto-Cell. By means of the precisely located window of the carrier, the light beam is reduced slightly in height and passes through the cell just above its bottom. This arrangement decreases the required sample size while retaining adequate energy for measurements. Constructed to ensure reproducible results by simply inserting carrier into sample chamber firmly so that the light shutter at bottom is completely opened. Made of nickel-plated brass, with handle at top and clip for retaining cell. Complete with Absorption Cell of Corex glass and Cover of polished plate glass.....**35.25**

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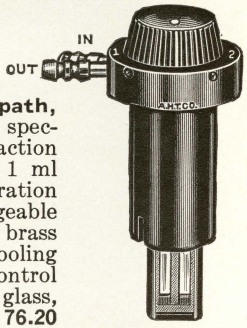

9085-C.

9085-C. ROTO-CELL, Thomas, 1 ml sample, 10 mm light path, for rapid scanning. A liquid-cooled double cell carrier for rapid spectrophotometric scanning at controlled temperatures. Swivel action permits instantaneous interchange *within the instrument*, of a 1 ml sample and blank or standard into light path, facilitating preparation of spectral transmission or absorption curves. Readily interchangeable with standard single place sample holder. Water jacket type, brass housing has inlet and outlet tubulature to connect with external cooling system. Includes light proof collar, rotating cell carrier and control knob for positioning cell. Complete with Partitioned Cell of Corex glass, two Cell Covers, and directions for use.....**76.20**

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THE FOUR-HUNDRED AND SIXTY-THIRD MEETING

of the

NORTHEASTERN SECTION A. C. S.

Friday, November 15

The Massachusetts Institute of Technology, Room 10-250

Entrance, 77 Massachusetts Avenue or the Dorrance Biology Laboratories

---

No Afternoon Meeting in November, 1957

Presentation of the sixth JAMES FLACK NORRIS AWARD for outstanding achievement in the Teaching of Chemistry to Farrington Daniels, of the University of Wisconsin

5:30 p.m. Preprandial Hour (reservations necessary) Campus Room, followed by

6:30 p.m. Dinner (reservations necessary) in the Campus Room of the M.I.T. Graduate House, entrance from the street, 308 Memorial Drive.

Price $2.75 per person (tax incl.)

Should you desire a place reserved, mail the enclosed post card, at once, or, after 2:30 p.m. Friday, call UNiversity 4-6900, Ext. 2961.

EVENING MEETING

Lockhart B. Rogers, presiding

8:00 p.m. "The James Flack Norris Award" by Lockhart B. Rogers
"Farrington Daniels" by Lawrence J. Heidt of M.I.T.
Acceptance of the Award
Address by Farrington Daniels
"Four Decades of Growth in the Teaching of Physical Chemistry"

9:30 p.m. Reception in honor of the recipient of the Award
The Moore Room, M.I.T.

Signing and mailing the dinner card or telephoning for reservations must be regarded as an obligation.

All interested are invited.

After five-thirty o'clock, the Reception Hall of the Campus Room, 308 Memorial Drive, west side of the Graduate House, will be available for members of the Section planning to attend the dinner.

A Committee will be in charge.

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Forms close for advertising on the 15th of the month and for text on the 12th of the month preceding issue.

Editorial

TEACHING AND RESEARCH

Generally speaking, our American schools of higher learning, large and small, are characterized by the creative spirit. Be it however diverse, this spirit manifests itself in myriad ways—writing a poem—putting new life into old documents for a clearer view of some corner of history—designing a new edifice—discerning new insight into science, engineering, mathematics and the like. Teaching, the abiding concern of all schools, gains ever renewed life through the investigations and penetrating thought of its devoted teachers. Every new fact discovered or theory set forth, quickens the atmosphere of the lecture hall, the class room or the laboratory. Students, young and old, catch this living spirit and rise, themselves, above the formalities of assignments, home problems or set experiments, into the fresher air of investigation.

The true realm of investigation is surcharged with the very fires of creation. In freedom it finds nourishment. In secrecy it sinks into the old and rather discredited atmosphere of alchemy. The dead of the night, the hidden cellar at midnight, the dark of the moon — these hide-away places need the light of day, the breath of the morning, the glory of high noon to sweep away all mystery. Under the open sky, all properly equipped minds may then evaluate the data presented, correct first impressions and so bring to the fore new knowledge and set it securely into the broad and deep stream of the great creative spirit which is the noblest realm of the mind of man.

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NOVEMBER SPEAKER

FARRINGTON DANIELS NORRIS AWARD RECIPIENT

On Friday evening, November 15, 1957, The James Flack Norris Award of the Northeastern Section of the American Chemical Society will be presented to Professor Farrington Daniels of the University of Wisconsin. This Award was made possible through the will of Mrs. Norris in which she asked the Northeastern Section to create a lasting memorial for her distinguished husband, James Flack Norris. To support this request, she made a most generous gift from her estate. The Award is given for outstanding achievement in the teaching of chemistry either at the college or the secondary school level.

Born in Minneapolis on March 8, 1889, Dr. Daniels obtained the bachelors degree in chemistry from the University of Minnesota in 1910. He pursued graduate studies in chemistry at Harvard. After completing the requirements for the doctorate in 1914, his first academic position was at the Worcester Polytechnic Institute, in Worcester, Massachusetts.

During the war, 1914-1918, he served as a first lieutenant in the Chemical Warfare Service. For the year 1919-1920 he worked as an electrochemist at the Fixed Nitrogen Research Laboratory in Washington.

In the fall of 1920, Dr. Daniels returned to academic life when he was appointed an assistant professor of chemistry at the University of Wisconsin. He has continued on the staff at Wisconsin to the present time where he has been chairman of the Department of Chemistry since 1952. His George Fisher Baker Lectures at Cornell University in 1935 dealt with "Chemical Kinetics." From 1944-1946 he was with the chemical division of the metallurgical laboratory of the Manhattan District in Chicago. He was the director of the laboratory in 1945-1946. For the next two years he was chairman of the Board of Governors of the Argonne National Laboratory.

When Dr. Daniels was elected president of the American Chemical Society in 1953, the University of Rhode Island honored the event by making him an honorary doctorate of science. Other honors which have come to him are the Willard Gibbs Medal in 1955 and the Priestly Medal Award in 1957. He has been honored by election to the American Academy of Arts and Sciences, the American Philosophical Society and the National Academy of Sciences. He holds membership in the American Chemical Society, the Faraday Society and the American Association for the Advancement of Science. In the A.A.A.S. he was chair-

(*Please turn to next Page*)

FARRINGTON DANIELS

(*Continued from the previous Page*)

man of the Chemistry Section for the decade, 1937-1947.

Dr. Daniels is author or co-author of four technical books, in addition to "Chemical Kinetics", *Physical Chemistry, Experimental Physical Chemistry, Mathematical Preparation for Physical Chemistry,* and *Solar Energy Research.* As if to give greater meaning to the last sentence of the first chapter of the volume, "Physical Chemistry," another book, "Challenge of Our Times" was published in 1953.

"Science is based on truth," he wrote in the text book, "and the scientist cannot allow himself to be influenced by any prejudice. Science has become such a potent factor in our national and international affairs that the scientist now faces a social responsibility that extends beyond the laboratory."

The principal fields of research which have interested Dr. Daniels are Chemical Kinetics, Oxides of Nitrogen and Nitrogen Fixation, Photochemistry, Atomic Energy, Thermoluminescence of Crystals, and the Utilization of Solar Energy. In each of these fields a series of scientific papers has been published.

ANALYTICAL GROUP

FRANK O'HALLORAN, President, Water Laboratory, Commonwealth of Massachusetts, Lawrence, Mass. MUrdock 2-5237.
RUSSEL T. WERBY, Secretary-Treasurer, Werby Laboratories. LI 2-0739.

The second meeting will be held at 8:00 p.m. on Wednesday, November 20, 1957, in Room 2-131, M.I.T.

James W. Ross, Jr., Instructor in Analytical Chemistry at M.I.T., will speak on

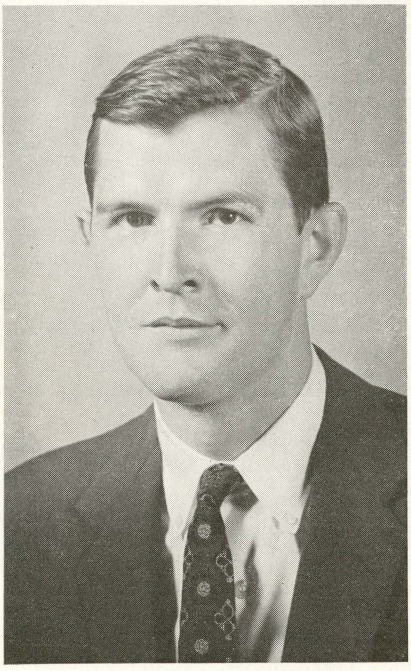
"Analytical Applications of the Hanging Drop Electrode"

Prior to the meeting there will be a dinner at 5:45 p.m. in the M.I.T. Faculty Club on the sixth floor of the Sloan Building at 50 Memorial Drive, Cambridge. Reservations may be made by telephoning Mr. Russell T. Werby of the Werby Laboratories, LI 2-0739.

All interested persons are invited.

FRIDAY THE FIFTEENTH

Reserve this date for the November meeting of the N. E. Section



JAMES W. ROSS, JR.

ANALYTICAL SPEAKER

James W. Ross, Jr. was born in Fort Lewis, Washington, in 1928. His early education was received in the public schools of California. After graduation from high school in 1945 he studied engineering at Oregon State College and the University of Utah, enrolled in the Army Specialized Training Program. From 1946 to 1948 he served on active duty in the Army at Fort Bliss, Texas, as a member of a group evaluating new radar equipment for anti-aircraft artillery.

Following honorable discharge from the army he entered the University of California at Berkeley where he received the B.A. degree in chemistry in 1951. He then joined the Tide Water

(*Please turn to Page* 42)

ANALYTICAL SPEAKER

(*Continued from Page* 40)

Associated Oil Co. where he worked on mass spectrometric and infrared methods for the analysis of petroleum fractions.

In 1954 he enrolled in the graduate school of the University of Wisconsin to work with Dr. Irving Shain on problems of Electrochemical Analysis. He received the Ph.D. in 1957. In September 1957 he joined the staff of the Chemistry Department of M.I.T. as an instructor in analytical chemistry.

His present research interests are in electroanalytical chemistry and the kinetics and mechanisms of electrode reactions.

ANALYTICAL GROUP

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ELASTOMER & PLASTICS GROUP

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The second meeting of the year will be a plant trip to the Nashua Corporation, 47 Franklin Street, Nashua, New Hampshire, on Tuesday, November 19, 1957. Small groups will be escorted through the plant starting at 3:30 P.M. as those attending arrive, with the last tour starting at 4:30 P.M. The complete trip will take about an hour. From Boston, the plant may be reached by following U.S. Route 3 to Nashua. Franklin Street is to the left, off Route 3 just after passing over the cement bridge crossing the Nashua River at the north end of the main shopping district.

As the tour groups finish, they may adjourn to the Leyton House Hotel immediately across the main street from the end of Franklin Street. A preprandial hour at their regular prices will be followed by a broiled chicken dinner, cost $3.00, at 6:30 P.M. Reservations are necessary for the tour and dinner, and may be made in writing or by phone to reach Mr. Henry S. Anthony, Tyer Rubber Company, 10 Railroad Street, Andover, Mass. (phone Andover 3090) not later than 10:00 A.M., Monday, November 18, 1957.

Following dinner at approximately 8:00 P.M., Dr. Vivian T. Stannett, of the State University College of Forestry, at Syracuse University, will speak on, "The Application of High Polymers to Paper."

The talk will discuss various ways in which synthetic high polymers may be applied to paper, both internally and as surface coatings. Principles involved and problems presented will be outlined. Some of the recent developments in the field, will be discussed in detail.

Vivian Thomas Stannett was born in England and is now a United States Citizen. He is a graduate of London University and received his Ph.D. from the Polytechnic Institute of Brooklyn. He has been employed in industry both in England and at the Koppers Company in Pittsburgh. Since 1952, he has been Professor of Polymer Chemistry at the State University College of Forestry at Syracuse University, Syracuse, New York. His researches include problems dealing with the application of polymers to paper, fundamental problems concerning the diffusion and solubility of gases and vapors in polymers, and general problems relating to polymerization kinetics.

Dr. Stannett is the Secretary of the Plastics Committee of TAPPI (Technical Association of the Pulp and Paper Industry), and author and co-author of about forty papers in the fields outlined above.

(*Please turn to Page* 44)

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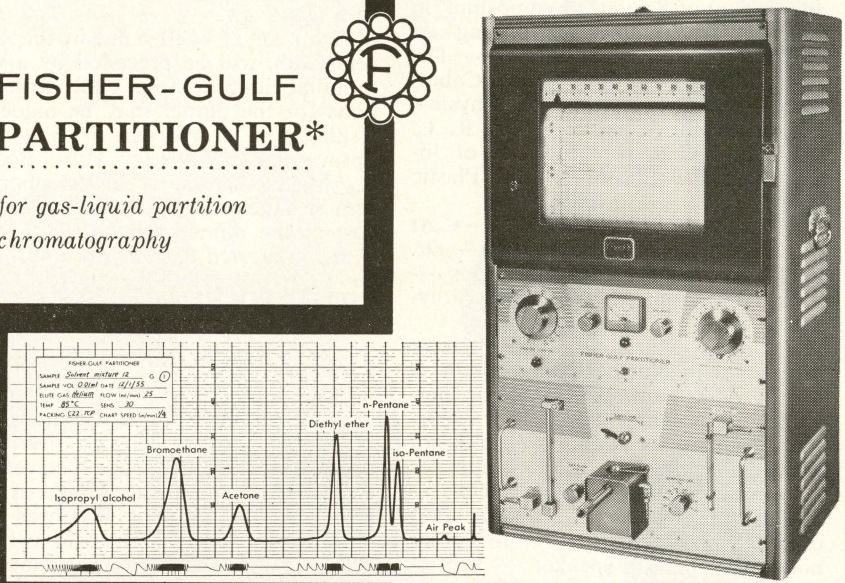

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ELASTOMER & PLASTICS GROUP

(*Continued from Page* 42)

FUTURE MEETINGS:

Wednesday, January 15, 1958 — Joint meeting with Analytical Group at Museum of Science. Symposium on analytical techniques pertaining to polymer mixtures. Speakers — Dr. A. I. Medalia of Godfrey L. Cabot, Inc. — "Interpretation of Physical Properties and Tests." — Dr. R. C. Lord, of M.I.T. — "The Use of Infrared in the Elastomer and Plastic Field."

Tuesday, February 18, 1958 — At Museum of Science. Speaker — Dr. R. J. Myers, of Rohm and Haas — "New Developments in Acrylate Polymers."

Thursday, March 13, 1958 — Joint meeting with Northeastern Section at M.I.T. Afternoon symposium on peroxides in polymer chemistry. Chairman — Professor Nicholas A. Milas of M.I.T. Speakers — Dr. Walter S. Ropp, of Hercules Powder Co. — "Industrial Aspects of Organic Peroxides." — Second speaker to be announced. Evening speaker — Professor Maurice Morton, of the University of Akron — subject to be announced.

Tuesday, April 15, 1958 — Annual Short Talks Meeting at Museum of Science. Chairman — J. Laurence Powell, of B. F. Goodrich Footwear and Flooring Co. Five speakers to be announced.

Tuesday, May 20, 1958 — Tenth Anniversary Meeting at Museum of Science. Speaker — Robert G. Seaman, of Rubber World — "New Horizons in Elastomers."

BOSTON SECTION OF THE ELECTROCHEMICAL SOCIETY

The second meeting of the Boston Section of the Electrochemical Society will be held at 8:00 p.m. on Tuesday, November 19, 1957, in the Officers Club of the Watertown Arsenal. Enter through the main Gate on Arsenal Street, Watertown. Dr. Abner Brenner, of the National Bureau of Standards, will speak on

"Electrodeposition Research at the National Bureau of Standards"

Dr. Brenner is chief of the Electrodeposition Section, Division of Chemistry, National Bureau of Standards of Washington, D.C. The topics to be discussed include hydrogen embrittlement due to electroplating, the protection of molybdenum from oxidation at elevated temperatures, nickel-aluminum alloy coatings and fused salt electrolysis.

A dinner at 6:30 p.m., in the Officers Club, will be preceded by a prepandial hour at 5:45 p.m. Reservations for the dinner may be made by writing to Dr. Worden Waring at 8 Spruce Park, Wellesley Hills, Boston 82, Massachusetts, or by telephoning him at BIgelow 4-7500, Ext. 431. The cost of the dinner will be $3.00.

All interested persons are invited.

ELECTROCHEMICAL SOCIETY SPEAKER

ABNER BRENNER

Abner Brenner, the November speaker before the Electrochemical Society was born in Kansas City, Missouri, August 5, 1908. He received the A.B. degree from the University of Missouri in 1929. His M.S. was won at the University of Wisconsin in 1930. While at Wisconsin he was assistant for Dr. Kahlenberg. He served as a junior chemist at the Bureau of Standards for five years, 1930-1935 and as an associate chemist from 1935 to 1950. Since 1950 he has been chief of the Electrodeposition Section, Division of Chemistry at the Bureau. He received the Proctor Award of the Electroplaters Society in 1946. He won the Ph.D. in chemistry from the University of Maryland in 1939.

Dr. Brenner holds memberships in the American Chemical Society, the Electroplaters Society, the Electrochemical Society and the Electrodepositors Technical Society. His researches include tungsten alloys, the physical properties of electrodeposits, electroless plating, electro deposition of metals from non-aqueous solutions and the deposition of molydbenum and aluminum.

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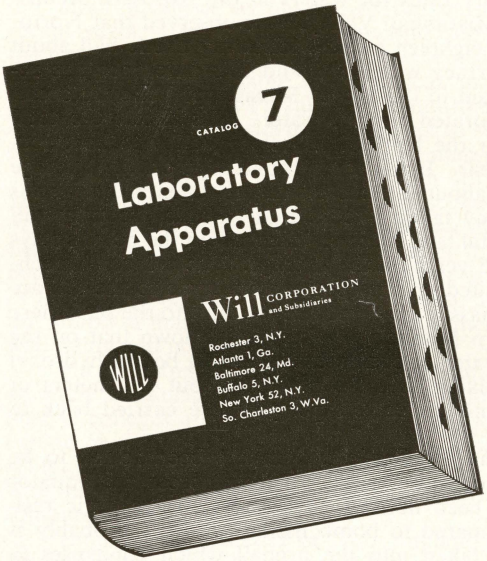

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USE OF COSMIC RAY AND BOMB TRITIUM IN HYDROLOGY AND METEOROLOGY

BY FRIEDRICH BEGEMANN AND W. F. LIBBY*
THE ENRICO FERMI INSTITUTE FOR NUCLEAR STUDIES
THE UNIVERSITY OF CHICAGO, CHICAGO, ILLINOIS

ABSTRACT

Résumé of the address by Dr. Libby before the Northeastern Section, A.C.S. October 10, 1957

The tritium produced during the Castle Operation in the Spring of 1954 has been used to study the circulatory rates for waters in the Northern Hemisphere, particularly in the northern Mississippi Valley. It is observed that Northern Hemisphere rains six months to eighteen months following Castle had about half the tritium content that the surface water had and this difference has revealed that about one-third of the rain in the Upper Mississippi Valley is ocean water and about two-thirds re-evaporated surface water. This allows the total inward transport of ocean water for the Upper Mississippi Valley to be calculated. It is about 1.0 meters per year. It has been found that on the average tritium has a residence half-life of about 6 years on the continental land mass of North America (radioactive decay taken into account). This probably will be applicable to most other continental land masses. Water from the oceans stays in the northern Mississippi Valley 15 years on the average. The principal mechanisms by which ocean water deposited on the continents returns to the sea are in the rivers and as moisture in air masses moving from the land to the sea where precipitation occurs. In the northern Mississippi Valley it is shown that on the average about 8 meters of ground water or equivalent including bound hydroxyl groups in clays are available for mixing with the rainfall, about .28 meters of water runs off annually in rivers, and .24 meters per year are carried back to the oceans by the winds.

The atmospheric residence time for Castle tritium has been found to be about 40 days. So far no mixing of any "excess" tritium across the equator into the Southern Hemisphere has been noticed. The short stratospheric residence time of bomb tritium as compared to bomb fission products probably is due to the large amount of water taken into the fireball which condenses in the cold of the stratosphere to form the familiar cloud of relatively large water drops or ice crystals. These are large enough to descend more quickly than the finer fission product particles.

The cosmic ray tritium production rate perviously calculated to be .14 T-atoms/cm^2/sec on the average now is thought to be too low, since the decay of tritium on land ground water and the amount by which the outward tritium vapor transport exceeds the inward flow from the seas are both now known to be important. The new value for $\overline{Q}$ is 1 T-atom/cm^2/sec as measured at the earth's surface and 2 T-atoms/cm^2/sec total, the difference being due to an assumed stratospheric residence time of 10 years on the basis of fission product fallout information. The direct measurement of tritium production cross sections and calculation of $\overline{Q}$ from cosmic ray intensities predicts that the average cosmic ray production rate for tritium is about .14 T-atoms/cm^2/sec averaged over the whole world, the intensity varying strongly with latitude about as the cosine of the latitude with a factor of 4 in intensity between the equator and the poles. The discrepancy may be due to an appreciable accretion of tritium directly from the sun as suggested by J. R. Arnold and B. Feld. The new higher value for the production rate means that the world-wide inventory of cosmic ray tritium is raised to about 30 kgs, from 1.8 kgs, the upper limit to the escape time for He^3 from the atmosphere of the earth is about 2.5 million years.

Studies of the circulatory pattern of hot springs have shown that the waters of the several hot springs studies are rainwater that has been stored for relatively brief periods. Study of groundwaters has shown that in large areas the water issuing from wells dug for normal use is older than 50 years. It appears

*Presently a Member of the U. S. Atomic Energy Commission.

that the technique of studying the tritium content of well water is quite likely to prove to be of real value in studying underground water supplies and in the prediction of their susceptibility to drought as well as depletion by pumping and the possibility of replenishment from rain or snow.

EFFECTIVE UTILIZATION OF ENGINEERS AND SCIENTISTS

Boston will play host on November seventh and eighth at Hotel Somerset, to a group gathering with the descriptive title "The New England Conference on Effective Utilization of Engineering and Scientific Manpower". This two-day affair promises to be one of the most important meetings held here in recent years. It is one of a nation-wide series of clinics, designed to help solve the mounting shortage of top quality scientists and engineers by promoting more effective use of available technological manpower. The conference has the active support of the President's Committee on scientists and engineers which was established by President Eisenhower to stimulate and coordinate the nation's efforts to meet the shortage of scientific man-power.

Its purpose is to provide a forum for the exchange of information and ideas on how available technical and scientific manpower resources are being or may be used most effectively. Proper utilization is viewed as the most practical immediate step toward alleviation of the current critical shortage of qualified technical personnel. The Conference is conceived as a thoughtful probing of the whole technical manpower problem, as one which may some day become not simply a matter of economics, but something deeply involving our national well-being and possibly our survival.

Participating by invitation will be some 200 top drawer engineering and scientific administrators, educators and officials drawn from New England industry, colleges and government. The participants will come prepared to contribute as well as to receive ideas in a series of panel discussions and round tables ranging over the whole broad subject. Panelists and audience alike should find this a stimulating and rewarding experience, with our whole economy the ultimate beneficiary.

Engineering Societies of New England are happy to join with the Massachusetts Society of Professional Engineers in sponsoring this Conference in cooperation with the President's Committee on Scientists and Engineers.

PRELIMINARY PROGRAM
NEW ENGLAND CONFERENCE ON EFFECTIVE UTILIZATION OF ENGINEERING & SCIENTIFIC MANPOWER
Hotel Somerset, Boston, Massachusetts

THURSDAY, NOVEMBER 7, 1957

12:30 p.m. Initiating Luncheon — Speaker: Paul H. Robbins, N.S.P.E.
2:15 p.m. Discussion Groups and Chairmen
1. Engineering Managers Round Table — Fred W. Argue, S. & W Eng'g Corp.
2. Research & Development Round Table — Charles S. Draper, M.I.T.
3. Small Company Round Table — Austin W. Fisher, Jr., A. D. L.
4. Compensation & Status — Charles C. Leader, G. E. Company

6:30 p.m. Banquet — Speaker: W. Scott Hill, G. E. Company

FRIDAY, NOVEMBER 8, 1957

9:30 a.m. Discussion Groups and Chairmen
1. Motivation — David A. Emery, G. E. Company
2. Development — William A. Jones, Detroit Controls
3. Control — Howard H. Reynolds, The Cryovac Company.
4. Technician — Leonard F. Sanborn, F. S. & T.
5. Problem Session — Charles E. Crede, Barry Controls

12:30 p.m. Summing-Up Luncheon — Speaker: Cuthbert C. Hurd, I. B. M

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MEETING OF THE DIRECTORS OF THE NORTHEASTERN SECTION OF THE AMERICAN CHEMICAL SOCIETY

October 1, 1957

The October meeting of the Directors was held at 4:30 P.M. in the Moore Room at M.I.T., Chairman Lockhart B. Rogers presiding. The following were present: Avery A. Ashdown, Edward R. Atkinson, John T. Blake, Richard W. Boyden, Robert P. Eddy, Austin W. Fisher, Jr., Stuart B. Foster, Thomas R. P. Gibb, Jr., Lawrence J. Heidt, Arno H. A. Heyn, David M. Howell, Paul C. Maybury, Lloyd H. Perry, Arnet L. Powell, Howard H. Reynolds, Robert A. Shepard, George R. Thomas, M. Kent Wilson and Stephen S. Winter. The minutes of the annual meeting were accepted as distributed.

The Chairman announced that Mr. Ostrowski of the Local Sections Relations Office will attend the November meeting of the Directors. A strong interest was expressed in publicizing the activities of various committees before the Section for the purpose of encouraging more participation of members.

On a motion duly made and seconded, the Directors approved the appointment of Elkan R. Blout as Alternate Councillor to replace George B. Walker, Jr.

Howard H. Reynolds previewed the coming programs. Of special interest is a multi-symposium to be held at the January meeting. It is hoped that a group of simultaneous meetings on a variety of subjects will attract a large proportion of the members.

The report of the Norris Award Committee was presented by Avery A. Ashdown. The recipient has been chosen and the award meeting will be held on a Friday rather than Thursday. On a motion duly made and seconded, it was

VOTED: that a budget of $1,550.00 be approved as recommended by the Norris Award Committee for expenses in connection with the Norris Award in November of 1957.

On a further motion, duly made and seconded, it was

VOTED: that the Trustees be authorized to make available a sum not to exceed $1,550.00 from the income account of the Norris Award Fund for the award to be presented in November of 1957.

The Treasurer's report was read by Lloyd H. Perry. In the period since July 17, 1957, the income was $21.25, with expenses of $476.43. The current balance is $3,049.42. The report was accepted.

According to Paul C. Maybury, the Committee on Chemistry Education will meet shortly to lay plans for the coming season. The committee intends to continue the programs initiated last year for high school teachers.

Arnet L. Powell summarized the activities of the Public Relations Committee. During the summer a series of television programs have been presented by WBZ-TV. This series is expected to continue through the winter. Over 350 press releases were distributed last season and press coverage was unusually good. Robert A. Shepard stressed the value to the section of our public relations consultant.

The report of the Budget Committee was given by Lloyd H. Perry. Expenses are climbing while our income is nearly stationary. Our tentative budget for this year is nearly double that of the 1953-1954 season. While nearly all items are up, the largest increases are in connection with THE NUCLEUS, Program, Hospitality and Public Relations Committees. While the present situation is not serious, this trend cannot be permitted to continue. A number of proposed cuts in the budget were discussed and action taken. The report was accepted.

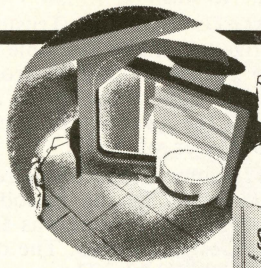
There being no further business the meeting was adjourned at 6:10 P.M.

Respectfully submitted,

RIDGLEY G. SHEPHERD, JR.
Secretary, Northeastern Section, American Chemical Society.

KIMAX

Have you looked into the story on the new "hard glass"? See page 38 of the November NUCLEUS.



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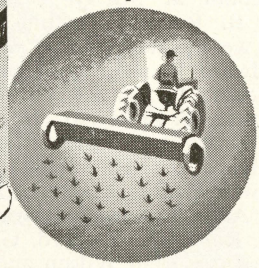

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(*Please turn to next Page*)

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(*Continued from previous Page*)

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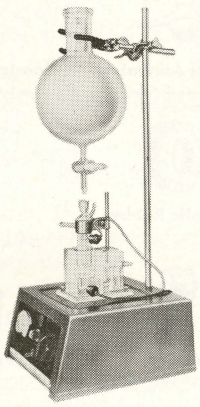

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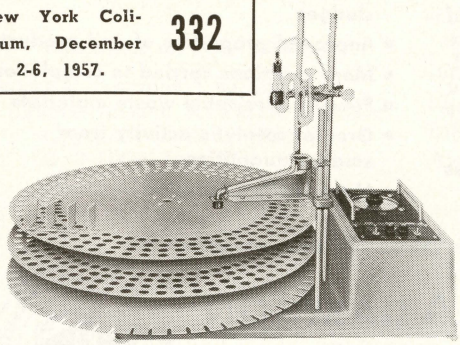

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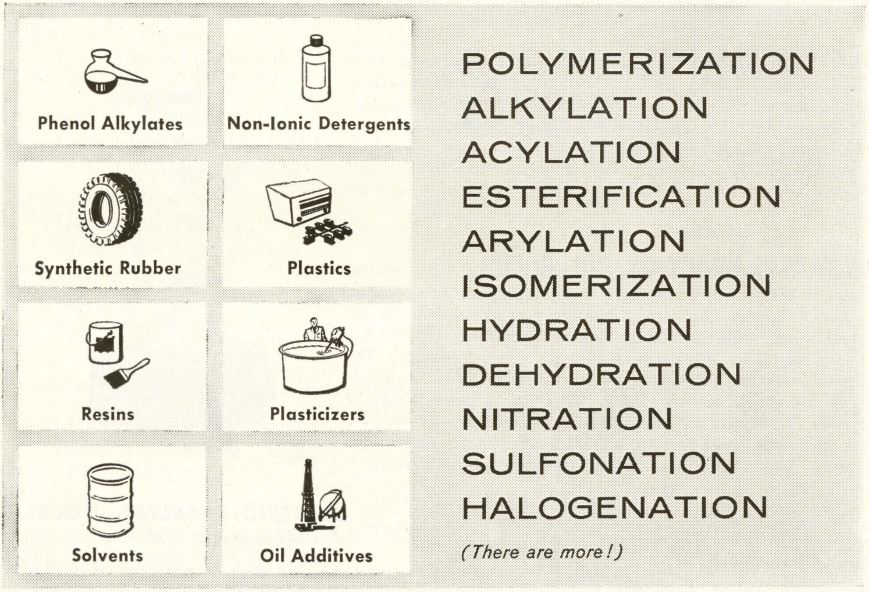

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(*Continued from Page* 52)

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Truman S. Licht
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DE 2-3200, Ext. 236

Thomas P. Norton
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AN 8-3200

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Irene Shea, Co-Chairman
(A & P Food Laboratories)
HU 2-7920

Barbara M. Davis
(Godfrey L. Cabot, Inc.)
UN 4-1430

Mrs. John M. Dutton
(Godfrey L. Cabot, Inc.)
UN 4-1430

John H. Fassnacht
(M.I.T.) UN 4-6900, Ext. 523

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OL 3-1000, Ext. 241

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LO 6-3910

Lockhart B. Rogers
(M.I.T.) UN 4-6900, Ext. 526

E. Bright Wilson, Jr.
(Harvard University)
KI 7-7600, Ext. 685

Richards Medal Committee

Members elected by the section

	Term expires July 1
Paul D. Bartlett, Harvard	1959
John C. Sheehan, M.I.T.	1959
Paul M. Doty, Harvard	1961
Richard C. Lord, M.I.T.	1961

Norris Award Committee

Members elected by the section

	Term expires July 1
James J. Lingane, Harvard	1960
Eugene G. Rochow, Harvard	1960
John A. Timm, Simmons	1958
Avery A. Ashdown, M.I.T.	1958

EUROPEAN CHEMICAL SHOW TOUR

A special all-expense tour has been organized to include attendance at the twelfth Achema-Chemical Engineering Congress and Exposition in Frankfurt, Germany, and the Chemical & Petroleum Technology Exhibition in London, both to be held in June 1958.

Recently . . .

Bacon Laboratories Admits Two Additional Partners

Richard S. Cass of Needham and William H. Crandell of Westboro have been admitted to partnership in the Frederick S. Bacon Laboratories, Watertown, Mass.

Bacon Laboratories specializes in chemical research and product development.

Both Cass and Crandell became associated with Bacon while studying at Northeastern University. They received B.S. degrees in 1952.

Cass is a member of A.I.Ch.E., A.C.S., and the New England Paint and Varnish Club. Crandell is a member of A.I.Ch.E., A.C.S., and the Society of Plastics Engineers.

26TH EXPOSITION OF CHEMICAL INDUSTRIES TO BE HELD IN NEW YORK IN DECEMBER

Announcement has been made that the Exposition of Chemical Industries will return to New York after an absence of six years, to be staged for the first time in the Coliseum during the week of December 2-6. The continued dynamic growth of the chemical process industries has resulted in some 500 exhibitors engaging space for displays that will occupy all four floors of the Coliseum.

With the chemical process industries representing a multi-billion dollar market now, and a still brighter future indicated, exhibiting firms are planning the greatest and most comprehensive array of chemical products and chemical process equipment since the exposition was established forty-two years ago. For the convenience of visitors, there will be special sections for displays of chemicals and raw materials, as well as laboratory equipment and supplies.

Reflecting the industries constant search for new processes, more efficient techniques and improved product performance, the majority of exhibits will have as their theme "Increase production — Cut costs!" The 35-40,000 visitors anticipated will find the exposition a comprehensive post-graduate course in new developments and recent innovations in the industry. E. K. Stevens, president of the International Exposition Company, is manager of the Exposition.

HOW TO TELL THE WORLD YOUR CHEMICAL STORY

The "Trail Blazers of Chemistry" offers a unique opportunity to the individual chemist or chemical engineer to obtain dignified and deserved recognition of his professional accomplishments. Back in 1944 the sponsors of the National Chemical Exposition conceived the idea of special non-commercial exhibits which would give a chemist or a research team a chance to present a display to the huge audience which attends these shows. These displays could illustrate any new idea, new product, process, piece of equipment, teaching device, or analytical method which had been developed.

The success of the project has been outstanding. Many of the exhibits from the seven expositions between 1944 and 1956 have later become articles of commercial importance. Among these have been the chlorophyllins used in tooth paste, soil stabilizers, and various synthetic fabrics. In addition, the exchange of ideas has helped countless others who have viewed the exhibits, and has resulted in much helpful publicity for chemists and chemistry.

Originally the exhibits were limited to three-by-four foot panels mounted in special racks. Regulations have now been broadened to include almost any type of exhibit, including operating models.

Dr. W. P. Utermohlen, Jr., director of research for Velsicol Chemical Corp., is chairman of the Trail Blazers Committee for 1958. The display will be part of the 10th National Chemical Exposition at the International Amphitheater, Chicago, September 9-12,

1958. This will be concurrent with the American Chemical Society national meeting. Information and regulations may be obtained from Dr. Utermohlen at the National Chemical Exposition, 86 E. Randolph St., Chicago 1, Illinois.

NORTHEASTERN SECTION TELEVISION PROGRAM

The Northeastern Section is sponsoring a series of television programs aimed at bringing before the public the broad field of chemistry and its varied applications in industry. Station WBZ-TV, Channel 4, has been kind enough to donate the bulk of a half-hour educational program for this purpose. The Northeastern Section program appears on the last Sunday of each month at 9:30 A.M.; it is part of the series known as "Dimensions". On November 24th the program will be presented by Tracerlab, Inc. The program will discuss "Radioisotopes — Their Measurement and Applications." The Public Relations Committee will welcome offers by industrial, government and university laboratories for participation in this series. Please communicate with Dr. Arnet L. Powell, Office of Naval Research, Boston Branch Office, 495 Summer Street, Boston 10, Massachusetts. LIberty 2-5100, Ext. 274.

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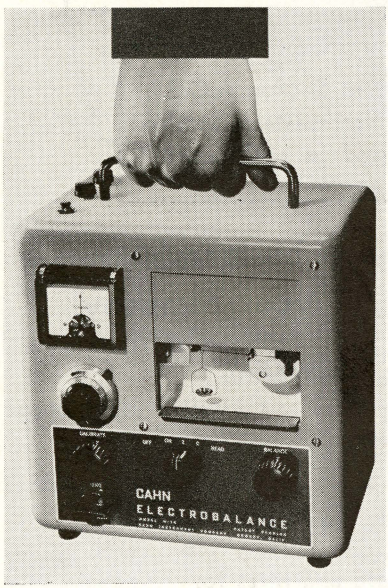

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